

— Tanta University

✗ Faculty of Medicine

Department of Tropical Medicine & Infectious Diseases

✓ Diploma and Master Exam. April. 2012

paper II

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**Infectious & Endemic Diseases**

**Time allowed: 3 hours**

**Give short account on:**

1. Management of a case with meningitis (10 marks)

2. Hydatid disease (10 marks)

3. Iron deficiency anemia (10 marks)

4. Causes , clinical picture and management of  
cerebral malaria (10 marks)

5. Coma in the Tropics ,causes and diagnosis  
(10 marks)

**Good Luck**

سمستر 3

Tanta University

Faculty of Medicine

Department of Tropical Medicine & Infectious diseases

Oct. 17, 2012

Master & Diploma Examination

Number of Questions: 7

Time Allowed: 3 Hours

Total: 50 Marks



## Infectious & Endemic Diseases

### All questions must be answered

1. Discuss; management and complications of Mumps. (7 marks)
2. Mention; diagnosis and treatment of chronic salmonellosis. (7 marks)
3. Recognize causes and diagnosis of Pyrexia of unknown Origin . (7 marks)
4. Write short essay about Ancylostoma anaemia . (7 marks)
5. Recognize the prevention of malaria. (7 marks)
6. Mention; managment of giardiasis. (7 marks)
7. A 15 year-old girl presented with a 12-hour history of fever and global headache. On examination she was febrile ( $37.5^{\circ}\text{C}$ ). She was fully conscious. Mild neck stiffness was noted but there were no other neurological signs. Cerebrospinal fluid analysis showed; Cell count : 100 /mL (60% lymphocytes)-Protein 0.8 g/L - Glucose 60 mg/dL - Gram stain: no organisms seen.

**What is the most likely diagnosis? What are the complications?**

1. Bacterial meningitis
2. Cryptococcal meningitis
3. Tuberculous meningitis
4. Viral meningitis (8 marks)

**Good Luck**

سمستر ۳

**Tanta University  
Faculty of Medicine  
Department of Tropical Medicine & Infectious  
Diseases**

## Infectious & Endemic Diseases

**Time allowed: 3 hours**

## **Give short account on:**

1. Immunopathology of Plasmodium falciparum (5 marks)
  2. Myopathy in tropics (5 marks)
  3. Non Typhoid salmonellosis (5 marks)
  4. Endemic hemoptysis (5 marks)
  5. Enterohemorrhagic E. Coli (5 marks)

**Good Luck**

Tanta University  
Faculty of Medicine  
Department of Tropical Medicine & Infectious diseases  
Oct. 17, 2012

MD Examination  
Number of Questions: 8  
Time Allowed: 3 Hours  
Total: 25 Marks



## Infectious & Endemic Diseases

سمسر ٣

### All questions must be answered

1. Describe the diagnosis of Familial Mediterranean fever. (3 marks)
2. Describe the pre & post exposure prophylaxis of Rabies . (3 marks)
3. Mention the diagnosis and treatment of neurobrucellosis . (3 marks)
4. Explain: Helicobacter pylori; kill or leave it. (3 marks)
5. Discuss: viral zonosis in Egypt; causes and management. (3 marks)
6. Write short essay on the river blindness in the tropics (3 marks)
7. Mention causes, clinical presentation and treatment of Wiels disease. (3 marks)
  
8. A 54-year-old woman with diabetes mellitus, who is working as a nurse, has a tuberculin skin test (TST) as part of an annual TB testing and prevention program. She had not received the BCG vaccine, nor had she been tested before. The TST reveals 5 mm of induration at 48 hours.  
**Which of the following is the most appropriate next step in this patient's treatment? and why ?**
  - a) Classify the test as positive and start therapy for latent TB infection
  - b) Obtain a chest radiograph to rule out active TB
  - c) Repeat the test after 2 weeks to check for a booster reaction
  - d) Report the test as negative and repeat after 1 year (4 marks)

**Good Luck**



### **Q 8 Problem solving**

**Repeat the test after 2 weeks to check for a booster reaction.**

In diabetic patients as well as for health care workers (as nurses) tuberculin skin test (TST) is considered positive if the induration is at least 10 mm or more. The delayed hypersensitivity response to *Mycobacterium tuberculosis* in infected persons may decline over time. Therefore, in previously infected individuals, an initial tuberculin skin test (TST) may show negative results but may "boost" the response to a second TST. Two-step testing is therefore recommended for the initial tuberculin skin testing of adults such as health care workers who will be tested periodically. If the initial TST is negative, a repeat TST should be performed 1 to 3 weeks later. If the result is positive, the person should be considered infected and treated accordingly; if the result is negative, the person is not infected.

Tanta University  
 Faculty of Medicine  
 Department of Tropical Medicine & Infectious diseases  
 Oct. 20, 2012

MD Examination  
 Number of Questions: 1  
 Time Allowed: 1.5 Hours  
 Total: 50 Marks



### Commentary

Egyptian 35 years married lady complained of frequent attacks of rise of temperature headache, easy fatigue, muscle and joint pains especially of small joints of the hand, mild chest pain and mild weight loss. She had present history of 6 months duration of similar recurrent attacks of variable durations.

**On exam:-** Pulse 100 / minute with infrequent dropped beats, Temperature 38°C, BP 130 / 85 mm Hg. Patient is fully conscious.

**Head & neck:** Multiple mouth ulcers , no lymph nodes , trachea central , neck veins normal , no arterial pulsations .

**Chest:-** Bilateral basal absence of air entry with stony dullness on percussion .

**Abdomen:-** No masses, no tenderness, normal movement, no lymphadenopathy.

**Chest x-ray:-** Bilateral mild pleural effusion, normal mediastinum, no lymph nodes.

**ECG:-** Mild cardiac ischemia .

**Echo cardiography:** Mild pericardial effusion .

**Blood exam:-** Normocytic normochromic anemia with mild leucopenia, Normal liver function tests, +v e anti-HCV Abs with negative PCR of HCV, Normal urea & creatinine, Normal CRP, Raised ESR (more than 100 in the first hour), Rheumatoid factor negative & Brucella agglutination negative .

**TTT:-** Anti-tuberculous treatment and treatment of cardiac ischemia were given followed within 7 days by remission of symptoms. However, recurrence of symptoms occurred again during the treatment.

More serological investigations were then ordered with good response after giving the appropriate treatment.

**(Comment and manage)**

Good Luck



Tanta University  
 Faculty of Medicine  
 Department of Tropical Medicine & Infectious diseases  
 October 9, 2013

Master & Diploma Examination  
 Number of Questions: 3  
 Time Allowed: 3 Hours  
 Total: 50 Marks



## Infectious & Endemic Diseases

### All questions must be answered

#### I. Case scenario: (10 marks)

A 62-year-old woman presents to the emergency department with a high fever, weakness, and malaise. She denies vomiting, dysuria, cough, or diarrhea. She has been receiving a six week course of antibiotics at home for osteomyelitis of her left foot. Her semi-permanent intravenous line in her arm has not been replaced for the past three weeks.

Her temperature is 38 C, blood pressure is 150/80 mm Hg, pulse is 96/minute, and respirations are 16/minute. She has a pansystolic murmur heard best over the left fifth intercostal space, in the midclavicular line. Her lungs are clear and her abdominal examination is normal. Her fingernails show small longitudinal splinter-type lesions. The skin at the intravenous site looks normal.

A chest x-ray film showed no effusion.

Laboratory studies show: Hemoglobin= 12.2g/dL, Hematocrit= 35.3 %, White blood cell count (WBC)= 16,100/mm<sup>3</sup>, Platelets= 283,000/mm<sup>3</sup>.

Urine is negative for blood, protein, nitrites, and leukocyte esterase.

**What is the most likely diagnosis? Confirm your diagnosis?**

#### II. MCQs: (15 marks)

1. Which of the following is true about Koplik's spots?
  - a. Are diagnostic of Measles
  - b. Located opposite the incisor teeth
  - c. Only appear when fever is over 39°C
  - d. They appear as red papules on the palmar surface of the hands
  - e. Typically appear two days after the rash
2. Clinical features of toxoplasmosis include the following except:
  - a. Microcephaly
  - b. Choroidoretinitis
  - c. Cervical lymphadenopathy
  - d. Mouth ulcers
  - e. Generalised lymphadenopathy
3. As regard Falciparum malaria the only false statement is:
  - a. Acute infection is not associated with splenomegaly
  - b. Is associated with periodic fever in a minority of cases
  - c. Has an incubation period of 8-15 days
  - d. May present as a gastroenteritis
  - e. May be treated with quinine

### سمسر 3

4. The following are not characteristic features of acute hepatitis B except:
  - a. Most patients present with splenomegaly.
  - b. It confers immunity to hepatitis A.
  - c. There is increased infectivity in the presence of the E antigen.
  - d. Pruritis is an important early symptom.
5. Subcutaneous nodules are a typical finding in except:
  - a. Neurofibromatosis
  - b. Cysticercosis
  - c. Onchocerciasis
  - d. Trichinosis
6. The followings may present with fever and diarrhea except:
  - a. Malaria
  - b. Entamoeba coli
  - c. Dengue
  - d. Campylobacter enteritis
  - e. Brucellosis
7. As regard Hepatitis A, the following are true except:
  - a. The virus has a single stranded RNA
  - b. The incubation period is 2-6 weeks
  - c. Is usually acquired by consumption of faecally contaminated food or water
  - d. Is maximally infectious at the peak of jaundice
  - e. Can be prevented by active immunisation
8. What is the most common cause of vitamin B12 malabsorption?
  - a. Pancreatic insufficiency
  - b. Bacterial overgrowth syndrome
  - c. Crohn's disease involving the terminal ileum
  - d. Pernicious anaemia
  - e. Ileal resection
9. Treatment of pseudomembranous colitis includes all the following except:
  - a) Oral metronidazole
  - b) Intravenous vancomycin
  - c) Oral vancomycin
  - d) Probiotics
10. The correct Nomenclature of the following fatty acid is: .

Methyl  
-CH<sub>3</sub>

Carboxyl  
-COOH

### مسئلہ 3

- a. 18:3 ω-6
  - b. 18:2 ω-6
  - c. 18:2 ω-9
  - d. 18:4 ω-6
11. Which nematode does not have pulmonary infiltrate with eosinophelia in the acute stage?
- a. Hookworms
  - b. Ascaris
  - c. Enterobius
  - d. Strongyloides
12. Microcytic hypochromic anemias include the following except:
- a. Iron deficiency anemia
  - b. Anemia of chronic disorders
  - c. Spherocytosis
  - d. Sidroblastic anemia
  - e. Thalassaemia
13. All hemolytic anemias cause splenomegaly and can be improved with splenectomy except :
- a. Sickle cell anemia
  - b. G6PD deficiency
  - c. Thalassaemia
  - d. Spherocytosis
14. As regard Hookworm, the following statements are wrong except:
- a. Is usually spread by the faeco-oral route
  - b. Is usually diagnosed by microscopy of adhesive tape prints taken from the perianal area
  - c. May block the pancreatic duct causing pancreatitis
  - d. The eggs of Necator americanus and Ancylostoma duodenale are indistinguishable on light microscopy.
  - e. Commonly causes diarrhoea in non-immunes
15. Enteric fever is characterized by the followings except:
- a. Bone marrow culture increases diagnostic yield in those previously given antibiotics.
  - b. Is zoonotic
  - c. Leucocytosis would be against a diagnosis of typhoid
  - d. The incubation period is usually 7-21 days.
  - e. Rose spots occur in typhoid but not paratyphoid fever

### III. Answer the following questions: (25 marks)

- |   |           |
|---|-----------|
| 1. Discuss in short: Travelers' diarrhea.             | (5 marks) |
| 2. Enumerate: Common causes of aseptic meningitis.    | (5 marks) |
| 3. Write short notes on: Resistant typhoid.           | (5 marks) |
| 4. Mention: Management of Toxoplasmosis in pregnancy. | (5 marks) |
| 5. Write short essay about: Nutritional anemias.      | (5 marks) |

Examination for Diploma Degree in:  
**Tropical Medicine & Infectious Diseases**  
Course Title: Tropical Medicine & Infectious Diseases .  
Date: October, 2018

Number of questions: Three  
Time Allowed: Three hours  
Total Assessment Marks: ١٥ Marks



Tanta University  
Faculty of Medicine  
Department of Tropical  
Medicine & Infectious  
Diseases

## Infection and endemic diseases

### **Case scenario ( 10 marks )**

A27- year – old male presented with malaise, pyrexia, lymphadenopathy and a maculopapular rash. The monospot test is negative .Given history of high risk sexual behavior.

1. What is the likely diagnosis? (5 marks)
2. What is the most appropriate investigation? (5 marks)

### **MCQS ( 15 marks )**

#### **1- Epstein-Barr virus is associated with the following except:**

- a) Burkitt's lymphoma
- b) Cervical neoplasia
- c) Nasopharyngeal carcinoma
- d) Pharyngitis
- e) Autoimmunne haemolytic anaemia

#### **2- Typical features of Schistosoma mansoni infection include the following except:**

- a) An endemic disease in Egypt and east Africa
- b) Abdominal pain with loose blood-stained stool
- c) Bowel papillomata
- d) Paraplegia and cor-pulmonale
- e) Weight loss and malabsorption due to small bowel disease

#### **3- Which of the following is TRUE regarding amoebic liver abscess?**

- a) Should be treated by diloxanide furoate alone
- b) Should be aspirated routinely
- c) Is associated with eosinophilia
- d) Usually affects the right lobe of the liver

#### **4- Typhoid patient may develop rose spots ----- days after onset of fever.**

- a) 7 days
- b) 10 days
- c) 5 days

5- Number of plasmodium species that cause malaria in humans

- a) 4
- b) 5

6- Black water fever is specific for :

- a) Plasmodium vivax
- b) Plasmodium malariae
- c) Plasmodium ovale
- d) Plasmodium falciparum

7- Rupture of spleen may occur in :

- a) Acute malaria
- b) Infectious mononucleosis ( glandular fever )
- c) Both a and b
- d) Neither a nor b

8- Gold standard of diagnosis of typhoid is :

- a) Widal test
- b) Blood culture
- c) Stool culture
- d) None of the above

9- MDR TB: is defined as resistance to

- a) more than three anti tubercular drugs
- b) isoniazid and rifampin irrespective of resistance to any other drug
- c) INH, PZA and Rifampicin
- d) fluoroquinolones and at least one of the three injectable second-line drugs used to treat TB

10- Regarding toxoplasmosis in humans ,which of the following is NOT TRUE:

- a) becomes active in immuno-compromised patients
- b) acute infection could be transmitted from mother to her 3year old child
- c) associated with cats
- d) is mainly diagnosed by serological tests

11- Blindness is a recognised complication of the following EXCEPT:

- a) cysticercosis
- b) Leprosy
- c) Onchocerciasis
- d) Legionella

12- The following parasites cause fever except:

- a) Trichinella spiralis
- b) Naegleria fowleri
- c) Hymenolopis nana
- d) Plasmodium vivax

**13- There is lymphadenopathy in the following infections except:**

- a) African trypanosomiasis
- b) Toxoplasmosis
- c) Schistosomiasis
- d) Kala-azar

**14-splenomegaly is not caused by :**

- a) schistomiasis
- b) malaria
- c) ascariasis
- d) Kala-azar

**15-Subcutaneous nodules are a typical finding in all except:**

- a) Neurofibromatosis
- b) Hydatid disease
- c) Cysticercosis
- d) Onchocerciasis

**Short questions: (25 marks)**

**1- Diagnosis and treatment of hepatitis E (10 marks)**

**2- Causes of fever of unknown origin (8 marks)**

**3- Short account on latent tuberculosis (7 marks)**

*Good Luck*



## Infectious & Endemic Diseases

**All questions must be answered**

**I. Case scenario:** (30 marks)

A 14 year old boy presents with in a confused state. He developed a fever 2 days Previously, and had been complaining of headache, fever and photophobia. He had Vomited once. Previous history was unremarkable. On examination his temperature was 38.0°C, and he has mild neck stiffness and photophobia. There is no rash. HR is 82/min and RR 12/min. There are no focal signs of infection.

**Cerebrospinal fluid analysis showed:**

Cell count 200 /mL (60% lymphocytes)

Protein 80 mg/dL

Glucose 78 mg/dL

Gram stain No organisms seen

- |  |                          |
|--|--------------------------|
| <ol style="list-style-type: none"> <li>1. What is your diagnosis?</li> <li>2. What is the differential diagnosis?</li> </ol> | (15 marks)<br>(15 marks) |
|--|--------------------------|

**II. MCQs:** (50 marks)

1. Brucellosis during first trimaster of pregnancy is treated with
  - a. Rifampicin monotherapy
  - b. Co-trimoxazole alone
  - c. A and b
  - d. All of the above
2. Chemoprophylaxis against meningitis is achieved by:
  - a. Rifampicin
  - b. Ciprofloxacin
  - c. Ceftriaxone
  - d. All of the above
3. A patient with prolonged diarrhoea undergoes esophagogastro-duodenoscopy. Biopsy of the small intestine demonstrates numerous crescent -shaped protozoa adjacent to the epithelial brush border. Which of the following organisms is the most likely pathogen?
  - a. Entamoeba histolytica
  - b. Escherichia coli
  - c. Giardia Lamblia
  - d. Naegleria fowleri
  - e. Trichomonas vaginalis

4. Which of the following does not occur in infectious mononucleosis?
  - a. Jaundice
  - b. Thrombocytosis
  - c. Atypical lymphocytosis
  - d. Presentation commonly before the age of 30.
  
5. A 18 year old homosexual male developed progressive pneumonia not responding to antibiotics. Methenamine silver staining of the sputum showed small circular cyst and Giemsa staining demonstrated the small, punctate nuclei of the trophozoites and intracystic sporozoite. Which is the most likely organism?
  - a. Toxoplasma gondii
  - b. Trypanosoma cruzi
  - c. Cryptococcus neoformans
  - d. Leishmania donovani
  - e. Pneumocystis carinii
  
6. Amoebic liver abscess is characterized by:
  - a. Should be treated by diloxanide furoate alone
  - b. Should be aspirated routinely
  - c. Is associated with thrombocytopenia
  - d. Usually affects the right lobe of the liver
  
7. E.coli 0157 :
  - a. Is a bowel commensal
  - b. Is an important cause of cholera-like illness
  - c. Is a recognised cause of the haemolytic uraemic syndrome
  - d. Can be prevented from causing clinical illness by vaccination
  
8. The following neoplasms have a known infective aetiology except :
  - a. Burkitt's lymphoma
  - b. Squamous carcinoma of the penis
  - c. Hepatocellular carcinoma
  - d. Squamous carcinoma of the bronchus
  - e. Nasopharyngeal carcinoma
  
9. Nephrotic syndrome is a recognised complication of infection with the following except
  - a. Schistosoma mansoni
  - b. Giardia lamblia
  - c. Hepatitis B virus
  - d. Mycobacterium leprae
  - e. Loa loa
  
10. The following infections are zoonoses except:
  - a .Salmonellosis
  - b.Leprosy
  - .cBrucellosis
  - d.Weil's disease (leptospirosis)
  
11. Brucellosis is characterized by the following except:
  - a. Is caused by a Gram positive bacillus
  - b. Causes spondylitis
  - c. Is treated with tetracycline
  - d. Is a recognised cause of chronic depression
  - e. Is contracted from unpasteurised milk

12. Blindness is a recognised complication of the following except:

- a. Leprosy
- b. Onchocerciasis
- c. Vitamin D deficiency
- d. Cysticercosis
- e. Toxoplasmosis

13. The following are features of congenital toxoplasmosis except :

- a. Generalised lymphadenopathy
- b. Microcephaly
- c. Intracranial calcification
- d. A good prognosis without treatment

14. The following are characteristic of early tetanus except:

- a. Rigid abdomen
- b. Rigid jaw muscles
- c. Dysphagia
- d. Hyperpyrexia
- e. Carpopedal spasm

15. Diseases have no convalescent carrier are all except:

- a. TB
- b. Typhoid
- c. Measles
- d. Mumps

16. 3 hours after eating in a restaurant, a patient presents with diarrhea, nausea and vomiting.

The most likely pathogen in the above patient is:

- a. Salmonella
- b. Vibrio parahemolyticus
- c. Shigella
- d. Campylobacter
- e. Staph aureus

17. The followings are features of cholera except:

- a. An incubation period of 21-28 days
- b. Sudden onset of profuse watery diarrhea followed by vomiting
- c. Acute circulatory failure developing within 12 hours of onset
- d. Rapid metabolic acidosis and dehydration

18. All the followings are causes of normocytic normochromic anemia except:

- a) Sickle cell anemia
- b) Hypersplenism
- c) Thalassemia
- d) Hereditary spherocytosis

19. Nephrotic syndrome is a common complication of infection with:

- a) Plasmodium vivax
- b) Plasmodium malariae
- c) Plasmodium ovale
- d) Plasmodium falciparum

**20. As regard giardiasis, all the following statements are correct except:**

- a) Can be diagnosed by duodenal biopsy
- b) Leaves the small bowel morphologically normal
- c) Causes abdominal distension
- d) Usually responds to treatment with metronidazole

**21. Which of the following statement is true of infections with Mycobacterium tuberculosis:**

- a. Non-sputum producing patients are non-infectious
- b. A positive tuberculin test indicates active disease
- c. Lymph node positive disease requires longer treatment than pulmonary disease
- d. In pregnant women treatment should not be given until after delivery
- e. Pyrazinamide has high activity against active extracellular organisms

**22. As regard leptospirosis, all the following statements are correct except:**

- a) Usually causes a self-limiting disease
- b) Causes leucopenia
- c) Causes jaundice
- d) Causes meningitis

**23. As regard septic meningitis, all the following statements are correct except:**

- a) Is commonly a result of meningococcal infection
- b) Due to meningococcal infection is very rare in those aged less than 1 year old
- c) Is associated with raised levels of IgM in the cerebrospinal fluid
- d) Is complicated by cranial nerve lesions

**24. Presenting features of HIV infection in childhood include the followings except:**

- a) Shrunken liver
- b) Failure to thrive
- c) Bilateral perihilar infiltrates on chest x-ray
- d) Recurrent otitis media

**25. Brucella is transmitted by all except**

- a) Aerosol transmission
- b) Ingestion of raw milk
- c) Man to man
- d) Contact with aborted fetuses

**III. Answer the following questions:**

**(100 marks)**

1. Write short essay about clinical picture of meningitis (20 marks)
2. Mention the diagnosis of Familial Mediterranean fever (20 marks)
3. Write short notes about: Praziquantel. (20 marks)
4. Write short essay about: Heat stroke (20 marks)
5. Discuss: Management of typhoid fever (20 marks)

Examination for Diploma in: Tropical Medicine  
Course title: Medical Microbiology & Immunology  
Date: 1/10 / 2018  
Term: October 2018  
Time allowed: 1.5 hour  
Total assessment marks: 25 marks



Tanta University  
Faculty of Medicine  
Microbiology Department

**Answer the following questions:**

- 1. Antimicrobial drug resistance:** Discuss different mechanisms and explain the origin of resistance. **(5 marks)**
- 2. Atopy:** Definition, mechanism, diagnosis and management. **(5 marks)**
- 3. Mention the mode of transmission and the prophylactic measures of the following diseases:** **(2 marks each)**
  - a- Whooping cough.
  - b- Hepatitis B.
  - c- Yellow fever.
- 4. Zoonotic diseases:** Define, mention the causative agents and discuss the diagnosis and the treatment of one of them. **(5 marks)**
- 5. A 20-year-old male presented to the emergency department complaining of profuse bloody diarrhea of two days duration and vomiting after eating undercooked hamburger. The patient was dehydrated and weak. Laboratory values revealed an elevated blood urea nitrogen and creatinine, with thrombocytopenia. Culture of the feces grew organisms producing pink colonies on MacConkey medium.** **(4 marks)**

1. What is the causative agent of this case?
2. What is the most likely serotype causing this case?
3. What is the mechanism of pathogenesis of this condition?
4. What is the most common complication of such case?

Chairman of the Department  
Prof. Mohamed Zakaria Hussein

*GOOD LUCK*

## الورقة الثانية

## MD examination in: Tropical Medicine &amp; Infectious Diseases



Date: October, 2018

Number of questions: Three

Time Allowed: three Hours

Total Assessment Marks: 260 Marks

Tanta University

Faculty of Medicine

Department of Tropical Medicine  
& Infectious Diseases

## Infection and endemic diseases

## Case scenario

**50 marks**

A 65-year -old man goes to his general practitioner complaining of diarrhea. This had developed suddenly 2days previously .His motions are watery and foul smelling. There is no blood or mucus in the stool. There is colicky abdominal pain not relieved by defecation. the man has poor appetite and feels nauseated .He feels tired, he has recently retired, and returned 2 weeks ago from a coach trip to Eastern Europe and Russia .No one else on the coach was ill during the holiday .He is otherwise well, with no significant, medical history .He smokes 10 cigarettes a day, and drinks two pints of beer a day. Examination is unremarkable, and the GP diagnoses traveler's diarrhea, and prescribes loperamide.

Two weeks later the patient returns to the surgery .The diarrhea has persisted and the patient has lost 6 kg in weight.

## Examination

On examination the patient looks well. His blood pressure is 158/88mmhg .Cardiovascular, respiratory and abdominal exam. are unremarkable.

## Questions

- |   |          |
|---|----------|
| 1-What is the likely diagnosis?                                       | 25 marks |
| 2-How would you further examine, investigate and manage this patient? | 25 marks |

## MCQ

**(60 Mark)**

**1- A-44-year old woman infected with HIV is noted to have a CD4 count of 180cells/mm.  
Which of the the following is recommended as a useful prophylactic agent in this patient at this point?**

- A-Fluconazole
- B-Azithromycin
- C-Trimethoprim- sulphamethoxazole
- D-gancyclovir

**2-Features of typhoid fever include (true or false)**

- A .72 hours incubation
- B-.Rapid onset of high fever
- C- eccymosis
- D- constipation

**3- gastrointestinal perforation all are true except**

- A- In typhoid is often through payers patch.
- B. is unusual in cholera
- C.Is seen in amebiasis
- D. carries a high mortality in infective diarrhea

**4-In tuberculosis (true or false)**

- A .acid fast bacilli can be identified by ziehlneelsen stain
- B-evening sputum have the best yield of organism
- C- Can be identified using aramino stain
- D- Definitive diagnosis is by blood culture
- E - There is rapid diagnostic test using PCR

**5-nephrotic syndrome is due to (true or false)**

- A-schistosoma mansoni
- B -plasmodium malaria
- C -HB virus
- D. mycobacteriumleprae

**6-Brucellosis (true or false)**

- A-Is caused by gram +ve organism
- B- Causes spondylitis
- C-is treated by tetracycline
- D-is a recognised cause of chronic depression

**7-in lepromatus leprosy,all are false except**

- A-nephropathy occurs before skin lesions
- B-skin lesions are anesthetic
- C-skin lesions are typically symmetrical
- D-lepromine test is positive

**8-The following viruses cause encephalitis except:**

- A-ARBO viruses.
- B-Rota virus
- C- Measles
- D -Rabies

**9- As regard Travellers'diarrhea, all are true except**

- A-the single most common causative organism is entero-invasive E. coli
- B- may be due to Aeromonas ssp.
- C- may be due to Cryptosporidium
- D-should be treated with antibiotics

**10-The following are recognized associations EXCEPT:**

- A-Hanta virus: haemorrhagic fever with renal syndrome
- B-E.coli 0157/H7: haemolyticuraemic syndrome
- C-Plasmodium vivax: tropical splenomegaly syndrome
- D- Chlamydia trachomatis: Fitzhugh Curtis syndrome

**11- As regard Chloroquine all are true except**

- A- is schizonticidal for P.ovale
- B-is the treatment of choice for non-falciparum malaria
- C-causes cinchonism
- D- inhibits plasmodialhaemin polymerase

**12- Concerning anti-tuberculous chemotherapy which is true:**

- A- pyrazinamide causes hyperuricaemia
- B- twice weekly regimens should be continued for at least 12 months
- C-pyridoxine is only needed by slow acetylators
- D- rifampicin can only be given orally

**13-Typical features of botulism include one of the followings:**

- A-circumoralparasthaesia
- B- extensor plantars
- C-diarrhoea
- D- post-tetanic potentiation on EMG (electromyography).

**14- HIV positive patients may receive,except**

- A- measles vaccine
- B-TY21a (oral typhoid vaccine)
- C-Hib vaccine( Haemophilusinfluenxae type b)
- D-Havrix (hepatitis A vaccine)

**15-Which of the following food or waterborne bacteria responsible for diarrheal illness has the longest incubation period?**

- A- Bacillus cereus
- B-Campylobacter jejuni
- C-Clostridium perfringens
- D-Vibrio parahaemolyticus

**16- A fever of two weeks' duration associated with neutropaenia is characteristically due to the following except**

- A-Disseminated tuberculosis
- B-brucellosis
- C-malaria
- D- influenza B

**17- As regard Quinine, all are true except**

- A-is gametocidal for mature gametocytes of Plasmodium falciparum.
- B- is active against schizonts of Plasmodium malariae
- C-resistance occurs in Plasmodium falciparum in South East Asia
- D-cerebrospinal fluid levels are much lower than serum levels following oral or intravenous administration

**18-The following are correctly paired except:**

- A-erythema nodosum tuberculosis
- B- erythema marginatum Lyme disease
- C-erythema multiforme,herpes simplex
- D-erythema induratumCutaneous tuberculosis

**19- In Cryptococcal meningitis which is true**

- A-is caused only by Cryptococcus neoformans
- B-is more common than cryptococcal pneumonia
- C-characteristically causes leucopenia
- D-only occurs in the immunosuppressed

**20- Which of these conditions is most likely to be seen with a CD4 count between 200 and 500?**

- A-pulmonary TB
- B- CMV
- C-Kaposi sarcoma
- D-cryptococcus

**21 -Extensive drug resistance of TB(XDR) is defined as**

- A: multi drug resistance TB that also is resistant to fluoroquinolones and at least one of the three injectable second-line drugs used to treat TB (amikacin, kanamycin, or capreomycin)
- B: *resistant to two most effective first-line therapeutic drugs, isoniazid and rifampin irrespective of resistance to any other drug*
- C: MDR TB that is resistant to either one of the injectable second line drugs or second-line therapeutic fluoroquinolones
- D: Strain resistant to more than one drug (excluding co resistance to INH and rif)

**22- Which one of the following is least associated with hepatosplenomegaly?**

- A-Glandular fever
- B-Chronic myeloid leukemia
- C-Amyloidosis
- D-Infective endocarditis

**23-Mutations in katG gene of *Mycobacterium tuberculosis* are responsible for resistance to:**

- A. INH
- B. Rifampicin
- C. Pyrazinamide
- D. Streptomycin

**24-.A 60 year old lady presents with a skin tear to her left shin on her coffee table. She is unsure of her Previous immunization status. How should this be managed?**

- A- ADT only
- B- ADT plus immunoglobulin
- C-Immunoglobulin only
- D-Immunoglobulin, ADT plus antibiotics

**25-relapse in malaria is common in:**

- A- Plasmodium Falciparum
- B-P.vivax
- C-P. ovale
- D-B and C

**26-12-year-old girl presents with painful epitrochlear lymphadenopathy associated with low-grade fever and malaise. The patient has a cat and also gave a history of a papillary lesion in the left forearm about 1 week or 10 days ago. The most likely etiologic agent in this situation is:**

- A-Bartonella henselae
- B-Epstein-Barr virus
- C-Staphylococcus aureus
- D-Yersinia pestis

**27-Fever, diarrhoea and eosinophilia in a returned traveller may be due to each of the following as the sole causative agent except:**

- A-Strongyloides stercoralis
- B-Schistosoma mansoni
- C-Capillaria philippinensis
- D-Plasmodium falciparum

**28-Praziquantel is used in the treatment of:**

- A-paragonimiasis
- B-trypanosomiasis (African sleeping sickness)
- C-schistosomiasis
- D-A and C
- E-A and B

**29-Concerning cholera which is not true**

- A-it has an incubation period of 1-5 days.
- B-it causes an inflammatory cell infiltrate in the lamina propria of the mucosa of the small intestine
- C-it causes muscle cramps
- D-the diagnosis is confirmed by microscopic examination of the stool

**30-which of the following is FALSE for tropical ulcers?**

- A-it is related to minimal trauma or friction
- B-it occurs due to infection with fusiform bacteria and spirochetes
- C-it is related to bad hygiene
- D-it is progressive fatal disease

#### **Short questions**

**150 marks**

- |   |           |
|---|-----------|
| 1-Causes and diagnosis of granulomatous meningitis? | (30 Mark) |
| 2-Cutaneous manifestation of AIDS?                  | (30 Mark) |
| 3-NIPAH infection ?                                 | (30 Mark) |
| 4-prevention of malaria?                            | (30 Mark) |
| 5-give short account on tenofovir?                  | (30 Mark) |

**GOOD LUCK**



Date: octuber, 2018

Number of questions:Three

Time Allowed: three Hours

Total Assessment Marks: 270 Marks

Tanta University  
 Faculty of Medicine  
 Department of  
 Tropical Medicine &  
 Infectious Diseases

### Infectious & Endemic Diseases

**All questions must be answered**

**a. Case scenario:**

(60 marks)

A 71 years old diabetic man presented with fever, abdominal pain and diarrhea 2 days after a course of clindamycin . Clinical exam revealed fever with lower abdominal tenderness without organomegaly . Stool exam showed no parasites and CBC showed leucocytosis . He was given antiparasitic drug with rapid improvement.

1. What is your diagnosis? (30 mark)
2. What is the most likely causative organism? (10 marks)
3. How can you confirm your diagnosis? (10 mark)
4. What is the most appropriate therapy for this patient? (10 mark)

**2. MCQs:**

(60 marks)

**1- A 35-year-old woman is admitted to hospital. As a part of liver screening ,the following results are obtained: Anti-HBs positive , Anti- HBc positive, HBs antigen positive**

**What is the patient's Hepatitis B status?**

- a-Probable hepatitis D infection
- b-Acute hepatitis B infection
- c-Previous immunization to hepatitis B
- d-Chronic hepatitis B
- e-Previous hepatitis B ; not a carrier

**2-What is the mechanism of action of macrolides**

- a-Causes misreading of mRNA
- b-Interferes with cell wall formation
- c-Inhibits DNA synthesis
- d-Inhibits RNA synthesis
- e-Inhibits protein synthesis

**3-oocyst of Toxoplasma is found in:**

- a. human tissue
- b. the brain of chronic patients
- c. faeces of infected cat
- d. all of the above

**4- contamination of contact lenses could lead to eye infection with :**

- a. Acanthamoeba
- b. Entamoeba coli
- c. Onchocerca valvulus
- d. Toxocara canis
- e. Loa Loa

**5-relapse in malaria is common in:**

- a. Plasmodium Falciprum
- b. P. vivax
- c. Malignant malaria
- d. P. ovale
- e. B and D

**6-plasmodium falciparum is the most serious due to:**

- a. absence of true relapse
- b. irregular paroxysms
- c. adherence and blocking of capillaries of internal organs
- d. multiple infections inside the RBC

**7- As regards Travellers' diarrhea all are true except**

- a. has an incubation period of at least 48 hours
- b. may be due to Aeromonas ssp.
- c. may be due to Cryptosporidium
- d. should be treated with antibiotics

**8-CSF examination in bacterial meningitis will show**

- a. High glucose high protein
- b. High glucose low protein
- c. Low glucose high protein
- d. Low glucose low protein

**9-Which of the following is FALSE regarding plague vaccine?**

- a. The vaccine protect against primary pneumonic plague
- b. vaccination is of little use during human plague outbreaks
- c. The vaccine is indicated for laboratory technicians in plague reference and research laboratories

**10- which of the following is true for HIV infected patient discovered to have chronic HCV?**

- a- It is contraindicated to treat HCV
- b- It is important to be cautious for drug - drug inter action
- c- It is essential to start anti retroviral drugs
- d- It is a must to treat HCV before starting antiretroviral drugs

**11- Can be used for late African trypanosomiasis:**

- a- Eflornithine
- b- Pentamidine
- c- Benzinidazole
- d- suramin
- e- nifurtimox.

**12-What is the causative agent of Filariasis ?**

- a. Cystode
- b. Nematode
- c. Platyhelminthes
- d. Protozoa

**13-How are human infections with Borrelia species transmitted?**

- a. Animal bites
- b. Arthropod vectors
- c. Contact with urine from an infected animal
- d. Inhalation
- e. Human contact with infected animals

**14- Which of these rashes is highly pruritic?**

- a. Chicken pox
- b. Rubella
- c. Roseola
- d. Measles
- e. Erythema Infectiosum

15. Which of the following is NOT an item in triad of hemolytic uremic syndrome?

- a. acute kidney injury.
- b. microangiopathic haemolytic anaemia
- c. thrombocytopenia, and
- d. thrombocytosis

16. which of the following infections is characterized by Presence of sulfur granules in pus?

- a. Subcutaneous mycosis
- b. Leprosy
- c. Actinomycosis
- d. Cutaneous Tuberculosis

17. Which of the following parasites can produce autoinfection to man?
- Ancylostoma duodenale
  - Ascaris lumbricoides
  - Necator americanus
  - Strongyloides stercoralis
18. Which of the following opportunistic organisms produces massive diarrhea
- Cryptosporidium parvum
  - Pneumocystis carinii
  - Toxoplasma gondii
  - A & C
- 19-Effective malaria control interventions include(true or false):
- mass use of Fansidar chemoprophylaxis F.
  - use of pyrethroid impregnated mosquito nets T
  - larviciding T
  - eradication of mosquito breeding sites T
- 20- Hepatitis A, all are true except
- the virus has double stranded DNA
  - the incubation period is 2-6 weeks
  - the illness is milder in young people
  - can be prevented by active immunisation
- 21- Which of the following materials can transmit Tuberculosis?
- Infected water
  - Infected hands
  - Infected blood
  - Infected air
- 22- Which of the following infections can be prevented by chlorination of water?
- Cryptosporidium
  - Vibrio cholerae
  - Hepatitis A virus
  - Giardia lamblia
- 23-Each of the following is true regarding hepatitis E , except
- A- It is a DNA virus  
B- Incubation period = 2-8 weeks  
C- Spread by the faecal-oral route  
D- There is no vaccine available  
E- Does not cause chronic disease

**24-Which of the following is least likely to cause pyrexia of unknown origin**

- A- Hypernephroma
- B- Colorectal cancer
- C- LYMPHOMA
- D- Atrial myxoma
- E- Tuberculosis

**25-Which one of the following malignancies is not associated with prior Epstein-Barr virus infection**

- A- Hodgkin's lymphoma
- B- Adult T-cell leukemia
- C- Burkitt's lymphoma
- D- Nasopharyngeal carcinoma
- E- Hairy leukoplakia

**26-A 45-year-old man presents painful genital ulcers. A diagnosis of chancroid is made. What is the causative organism?**

- a- Treponema pallidum
- b- Chlamydia
- c - Haemophilus ducreyi
- d- Calymmatobacterium granulomatis
- e- Herpes simplex virus

**27- Which of the following infections usually has the longest incubation period**

- A- Meningococcus
- B- CMV
- C- Dengue fever
- D- Diphtheria
- E- Influenza

**28- Which of the following is true regarding the *Salmonella* species**

- a- Rose spots appear in all patients with typhoid
- b-They are normally present in the gut as commensals
- c-They are anaerobic organisms
- d-In patients with sickle cell disease, *Salmonella* is the most common cause of osteomyelitis
- e-*Salmonella typhi* can be categorized into type A, B and C

**29-Which of the following vaccines uses a whole killed organism?**

- A- Pneumococcus
- B- Meningococcus
- C- Typhoid
- D- Oral polio
- E- Diphtheria

**30- What is the first line treatment in HIV patients with Pneumocystis carinii pneumonia?**

- A- Flconazole
- B- Co-trimxazole
- C- Ceftriaxone
- D- Ganciclovir
- E- Sulfadiazine and pyrimethamine

**III. Answer the following questions:** (150 marks)

- 1. Write short essay about: Heat exhaustion (30 marks)
- 2. Discuss: diagnosis of tuberculosis (30 marks)
- 3. Give short account on semiprevir (30 marks)
- 4. Describe clinical presentations of toxoplasmosis (30 marks)
- 5. What is the definition & diagnosis of AIDS? (30 marks)



Tanta University

Master &amp; Diploma Examination

Faculty of Medicine

Number of Questions: 3

Department of Tropical Medicine &amp; Infectious diseases

Time Allowed: 3 Hours

April. 9, 2014

Total: 50 Marks

## Infectious & Endemic Diseases

### All questions must be answered

#### I. Case scenario: (10 marks)

A 14 year old boy presents with in a confused state. He developed a fever 2 days Previously, and had been complaining of headache, fever and photophobia. He had Vomited once. Previous history was unremarkable.

On examination his temperature was 38.0°C, and he has mild neck stiffness and photophobia. There is no rash. HR is 82/min and RR 12/min. There are no focal signs of infection. **Cerebrospinal fluid analysis showed:**

Cell count 200 /mL (60% lymphocytes)

Protein 80 mg/dL

Glucose 78 mg/dL

Gram stain No organisms seen

1. **What is your diagnosis?**
2. **What is the differential diagnosis?**

#### II. MCQs: (15 marks)

1. The followings are features of cholera except:

- a) An incubation period of 5-10 days
- b) Sudden onset of profuse watery diarrhea followed by vomiting
- c) Acute circulatory failure developing within 12 hours of onset
- d) Rapid metabolic acidosis and dehydration

2. The only helpful measure in assessment of nutritional state of cirrhotic patient with ascites is:

- a) Body weight
- b) Body mass index
- c) Mid-arm muscle circumference
- d) Waist circumference

3. Chemoprophylaxis of meningitis is not achieved by:

- a) Ciprofloxacin
- b) Rifampicin
- c) Ceftriaxone
- d) Penicillin

4. All the followings are causes of normocytic normochromic anemia except:

- a) Sickle cell anemia

- b) Hypersplenism  
 c) Thalassemia  
 d) Hereditary spherocytosis
5. The following statements about complementary proteins are true except:  
 a) Each one of them is incomplete protein source  
 b) Each one of them is deficient in some essential amino-acids  
 c) They are of animal origin  
 d) Two or more of them complete each other to form complete protein
6. Nephrotic syndrome is a common complication of infection with:  
 a) Plasmodium vivax  
 b) Plasmodium malariae  
 c) Plasmodium ovale  
 d) Plasmodium falciparum
7. The following infections are zoonosis except:  
 a) Salmonellosis  
 b) Toxocariasis  
 c) Weil's disease (leptospirosis)  
 d) Cholera
8. As regard giardiasis, all the following statements are correct except:  
 a) Can be diagnosed by duodenal biopsy  
 b) Leaves the small bowel morphologically normal  
 c) Causes abdominal distension  
 d) Usually responds to treatment with metronidazole
9. As regard brucellosis, all the following statements are correct except:  
 a) Is caused by a Gram positive bacillus  
 b) Causes spondylitis  
 c) Is treated with tetracycline  
 d) Is contracted from unpasteurized milk
10. As regard leptospirosis, all the following statements are correct except:  
 a) Usually causes a self-limiting disease  
 b) Causes leucopenia  
 c) Causes jaundice  
 d) Causes meningitis
11. The following are features of congenital toxoplasmosis except:  
 a) Generalized lymphadenopathy  
 b) Microcephaly  
 c) Thrombocytopenia  
 d) Intracranial calcification  
 e) A good prognosis without treatment

12. The following may occur in infectious mononucleosis except:

- a) Jaundice
- b) Thrombocytosis
- c) Atypical lymphocytes
- d) Presentation commonly before the age of 30 years

13. As regard septic meningitis, all the following statements are correct except:

- a. Is commonly a result of meningococcal infection
- b. Due to meningococcal infection is very rare in those aged less than 1 year old
- c. Is associated with raised levels of IgM in the cerebrospinal fluid
- d. Is complicated by cranial nerve lesions

14. Presenting features of HIV infection in childhood include the followings except:

- a) Shrunken liver
- b) Failure to thrive
- c) Bilateral perihilar infiltrates on chest x-ray
- d) Recurrent otitis media

15. Brucella is transmitted by all except

- a) Aerosol transmission
- b) Ingestion of raw milk
- c) Man to man
- d) Contact with aborted fetuses

**III. Answer the following questions: (25 marks)**

- |   |           |
|---|-----------|
| 1. Write short essay about: Fever of Unknown Origin   | (5 Marks) |
| 2. Mention: Diagnosis of Familial Mediterranean fever | (5 Marks) |
| 3. Write short notes about: Praziquantel.             | (5 Marks) |
| 4. Enumerate: Causes of anemia in tropics             | (5 Marks) |
| 5. Discuss: Prevention of malaria                     | (5 Marks) |

مواعيد امتحانات الشفوي و الكلينيكال بالقسم:

• طلبة الماجستير + طلبة الدبلومة من رقم 1 الى 8 ----- يوم الأحد 2014/4/20

• طلبة الدبلومة من رقم 9 الى 21 ----- يوم الثلاثاء 2014/4/22

Tanta University

Master &amp; Diploma Examination

Faculty of Medicine

Number of Questions: 3

Department of Tropical Medicine &amp; Infectious diseases

Time Allowed: 3 Hours

October, 2014

Total: 50 Marks



## Infectious & Endemic Diseases

### All questions must be answered

#### I. Case scenario: (10 marks)

A 39-year-old man with HIV is admitted due to shortness of breath. Chest examination was more or less normal. CBC showed leucopenia with a CD4 count  $300/\text{mm}^3$ . Chest x-ray showed bilateral interstitial pulmonary infiltrates. Bronchoalveolar lavage was done and demonstrated unicellular eukaryotes.

1. What is your diagnosis? (3 mark)
2. What type of staining should be applied to the bronchoalveolar lavage to demonstrate the organism? (2 mark)
3. What is your treatment plan for this patient? (3 mark)
4. Should you give this patient long term prophylactic therapy and why? (2 mark)

#### II. MCQs: (15 marks)

1. Which of the following is a live attenuated vaccine?
  - a. Pneumococcus.
  - b. Meningococcus.
  - c. Typhoid.
  - d. Oral Polio.
  - e. Diphtheria.
2. Infection with schistosomiasis is a risk factor for
  - a. Colorectal cancer.
  - b. Lung cancer.
  - c. Oesophageal cancer.
  - d. Gastric cancer.
  - e. Bladder cancer.

3. Each of the following is a feature of tetanus, except
  - a. Trismus.
  - b. Opisthotonus.
  - c. Hydrophobia.
  - d. Dysphagia.
  - e. Ritus sardonicus.
4. Each of the following is associated with a false negative tuberculin skin test, except?
  - a. Lymphoma.
  - b. Miliary TB.
  - c. Sarcoidosis.
  - d. Chronic renal failure.
  - e. HIV.
5. Which of the following anti-tuberculous drugs is most associated with optic neuritis?
  - a. Rifampicin.
  - b. Streptomycin.
  - c. Isoniazid.
  - d. Ethambutol.
  - e. Pyrazinamide.
6. Which of the following is a gram negative rod?
  - a. Neisseria gonorrhoea.
  - b. Moraxella catarrhalis.
  - c. Haemophilus influenza.
  - d. Listeria monocytogenes.
  - e. Corynebacterium diphtheriae.
7. What is the first line treatment in hydatid disease?
  - a. Metronidazole.
  - b. Ciprofloxacin.
  - c. Itraconazole.
  - d. Albendazole.
  - e. Sodium stibogluconate.
8. Which one of these organisms is responsible for cat scratch disease?
  - a. Bordetella pertussis.
  - b. Moraxella catarrhalis.
  - c. Bartonella henselae.
  - d. Francisella tularensis.
  - e. Yersinia enterocolitica.
9. The mechanism of action of the anti-viral agent amantadine is?
  - a. Inhibits DNA polymerase.
  - b. Protease inhibitor.
  - c. Nucleoside analogue reverse transcriptase inhibitor.
  - d. Inhibits uncoating of virus in the cell.
  - e. Interferes with the capping of viral mRNA.

10. The most common source of bacterial infection of intravenous cannulas is
  - a. Contamination of fluids during the manufacturing process.
  - b. Contamination of fluids during insertion of the cannula.
  - c. Contamination at the site of entry through the skin .
  - d. Contamination during the injection of medications.
  - e. Seeding from remote sites as a result of intermittent bacteremia
  
11. Which of the following is false regarding mumps
  - a. Orchitis is typically bilateral.
  - b. Aseptic meningitis is a complication.
  - c. Amylase may be increased despite no evidence of pancreatitis clinically.
  - d. Sublingual swelling may occur.
  - e. All the above
  
12. What does EHEC not cause?
  - a. Mild diarrhea.
  - b. Hemorrhagic colitis.
  - c. Afebrile watery diarrhea.
  - d. Hemolytic-uremic syndrome.
  - e. All the above.
  
13. Colonoscopy demonstrates mucosal ulcerations and bleeding, can look like ulcerative colitis with which of the following infections:
  - a. Giardia lamblia.
  - b. Entamoeba histolytica.
  - c. Cryptosporidium parvum.
  - d. Isospora belli.
  - e. Non of the above.
  
14. Relapsing malaria with the fewest % RBC's parasitized
  - a. Plasmodium falciparum.
  - b. Plasmodium vivax.
  - c. Plasmodium ovale.
  - d. Plasmodium malariae.
  - e. Mixed infection with Plasmodium vivax and Plasmodium falciparum.
  
15. A 35-year-old woman is admitted to hospital. As part o a liver screen, the following results are obtained  
Anti – HBs positive  
Anti – HBC positive  
HBs antien positive  
What is the patient's hepatitis B status
  - a. Probable hepatitis D infection.
  - b. Acute hepatitis B infection
  - c. Previous immunisation to hepatitis B.
  - d. Chronic hepatitis B.
  - e. Previous hepatitis B infection, not a carrier.

**III. Answer the following questions: (25 marks)**

1. Write short essay about: Ebola haemorrhagic fever.
2. Discuss: Management of meningococcal meningitis
3. Write short essay about: aflatoxin.
4. Mention: malignancies associated with prior Epstein-Barr virus infection.
5. Discuss types and treatment of necrotising fasciitis.

**Good Luck**